Wrap Up
Session 2

Prof Riham Abu-Zeid

A patient presented with jaundice and multiple thrombosis at different sites . Serum amylase, CEA and CA 19-9 where found to be elevated . The doctor ordered a CT .

- **Which organ is most likely expected to show**

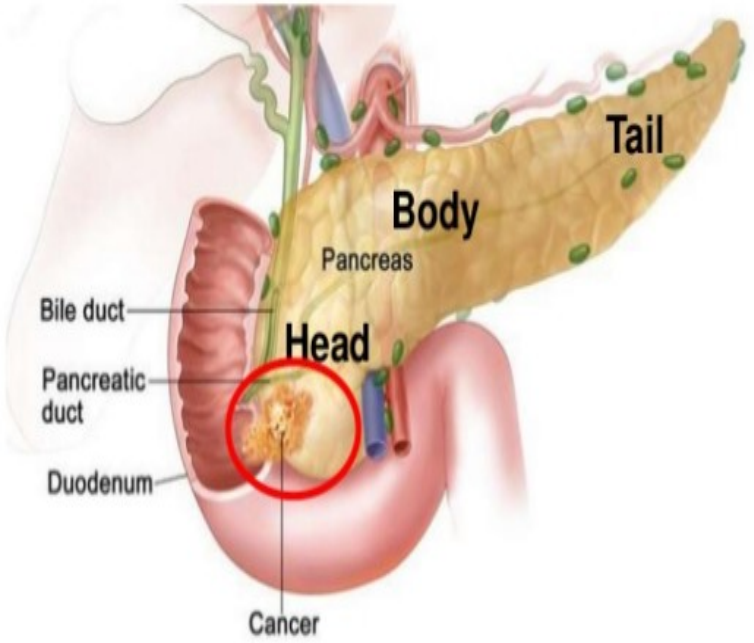
Diseases of Pancreas

Sites

1.Head

https://image.slidesharecdn.com/cpc-4-2-3-hbs-biliarydis-pathlec-130519173234-phpapp02/95/pathology-of-biliary-disorders-64-638.jpg?cb=1368985184

Do you think the mass is in the head or tail ? Why ?



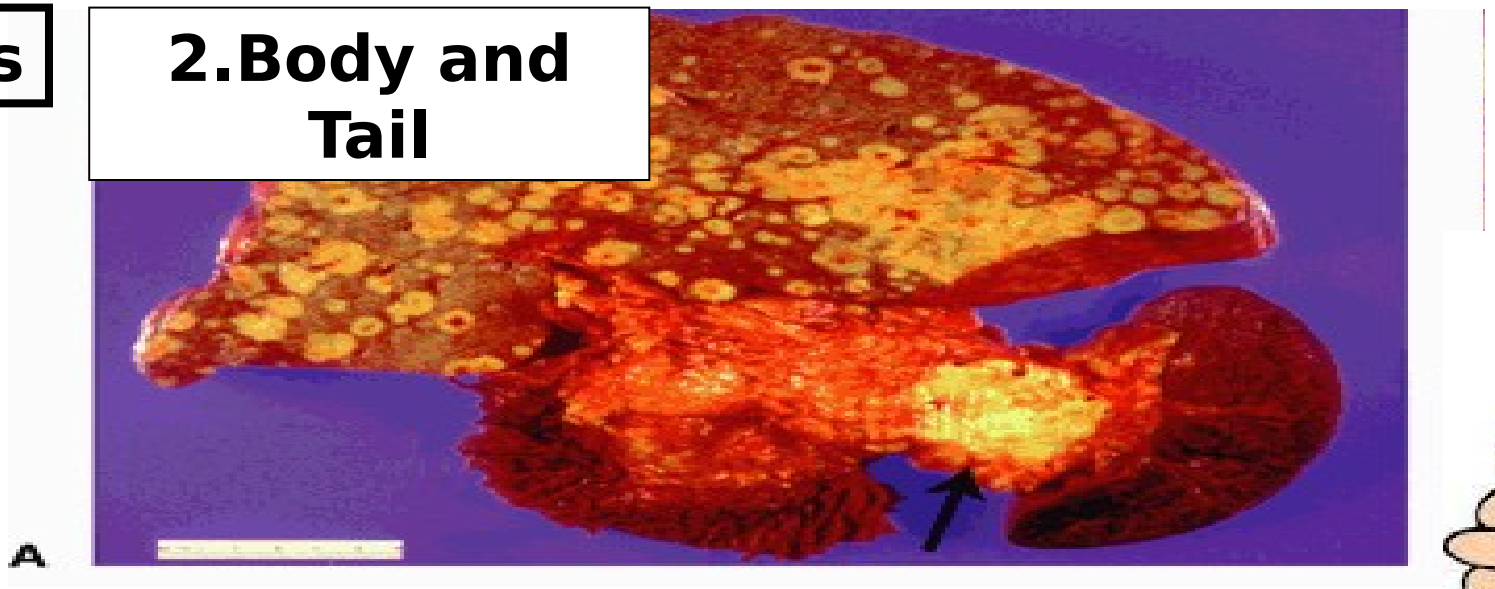
https://www.drkodurioncology.com/wp-content/uploads/2018/05/Screenshot14.png

Cancer head of pancreas is detected Earlier than cancer body or tail due to Invasion of ampullary region leading to Progressive obstructive JAUNDICE

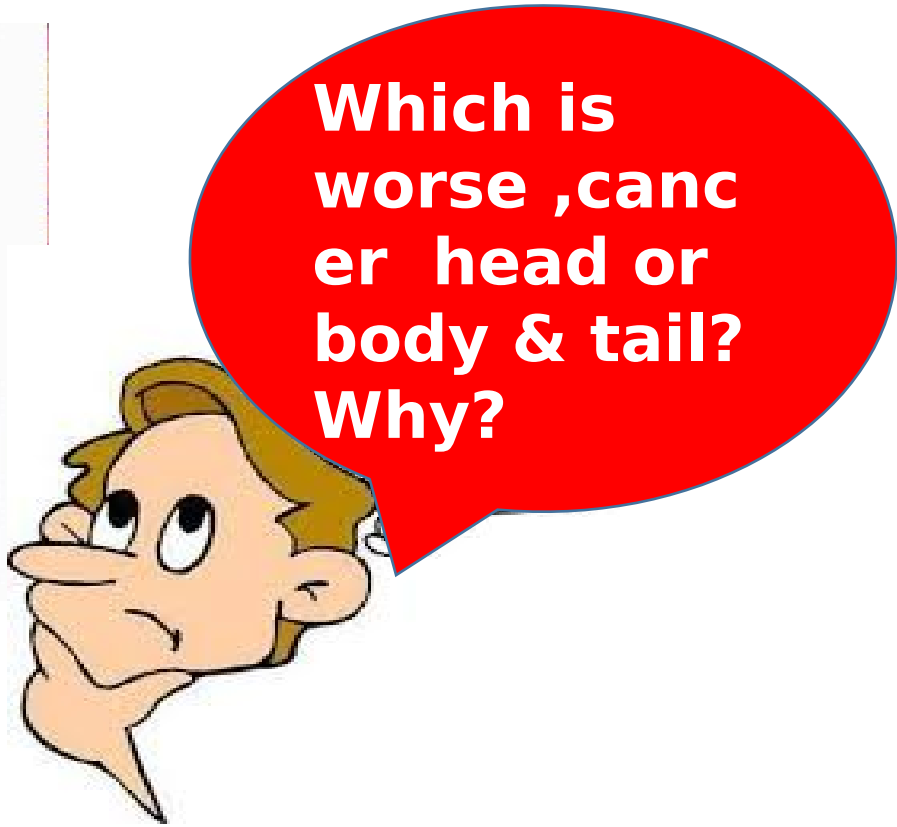
Diseases of Pancreas

Sites

2.Body and Tail



https://m1.paperblog.com/i/31/319600/el-cancer-pancreas-es-uno-mas-letales-L-hTTq2c.jpeg



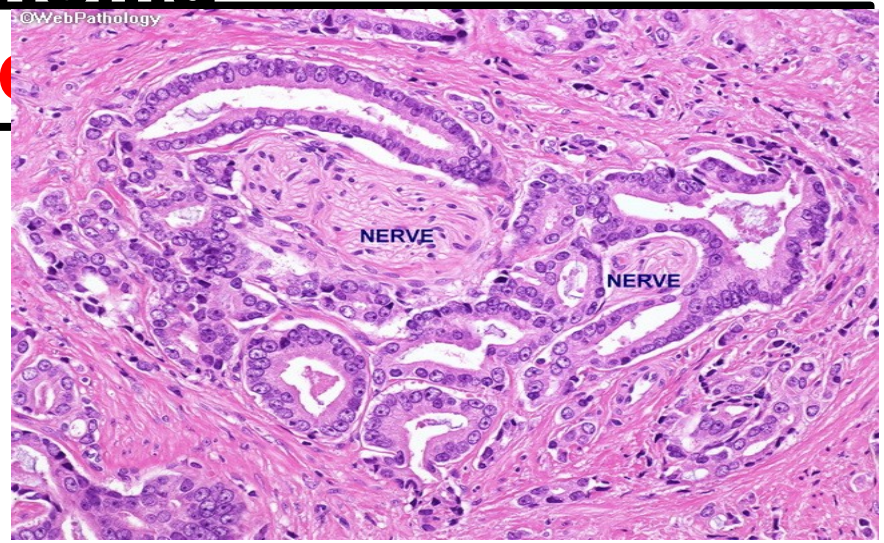
Tumours of body and tail:

Silent growth and metastases may be first presentation as there is no obstruction of biliary tract

Diseases of Pancreas

Ductal Adenocarcinoma

- **What is its expected microsc**
  - **Adenocarcinoma?? Describe**
  - **DESMOPLASTIC reaction is extensive**
  - **Perineural invasion**
  - **Invade peripancreatic extensively**
- **Paraneoplastic syndrome:**
  - **Multiple thrombosis in different sites**
  - **(due to procoagulants secreted by tumor) known as: Migratory thrombophlebitis or**



https://www.webpathology.com/slides-13/slides/Prostate_CaP_Misc_PNI_4_Resized.jpg

Pancreas

Match

A. Acute pancreatitis

2-4

B.Chronic pancreatitis

5

C. Pancreatic ductal adenocarcinoma

1-3

1. **Glands /Acini variable in size and shape lined by cells having pleomorphic hyperchromatic nuclei and mitoses**
2. **Elevated SERUM AMYLASE AND LIPASE with low CALCIUM**
3. **Elevated CEA and CA-19-9**
4. **Hemorrhage- inflammation –fat necrosis-calcification**
5. **Fibrosis -Inflammation -Dilatation of ducts +/- calcification**

Meckel’s diverticulum ,Malabsorption, Hirschsprung’s diseas

Match

1. **Celiac disease**
2. **Meckel’s diverticulum**
3. **Hirschsprung’s disease**
4. **Whipple disease**

a. Defective T cell function- (PAS-positive) macrophages in intestinal mucosa

b. Sensitivity to gluten (T cells reaction & antibodies destroy enterocytes)

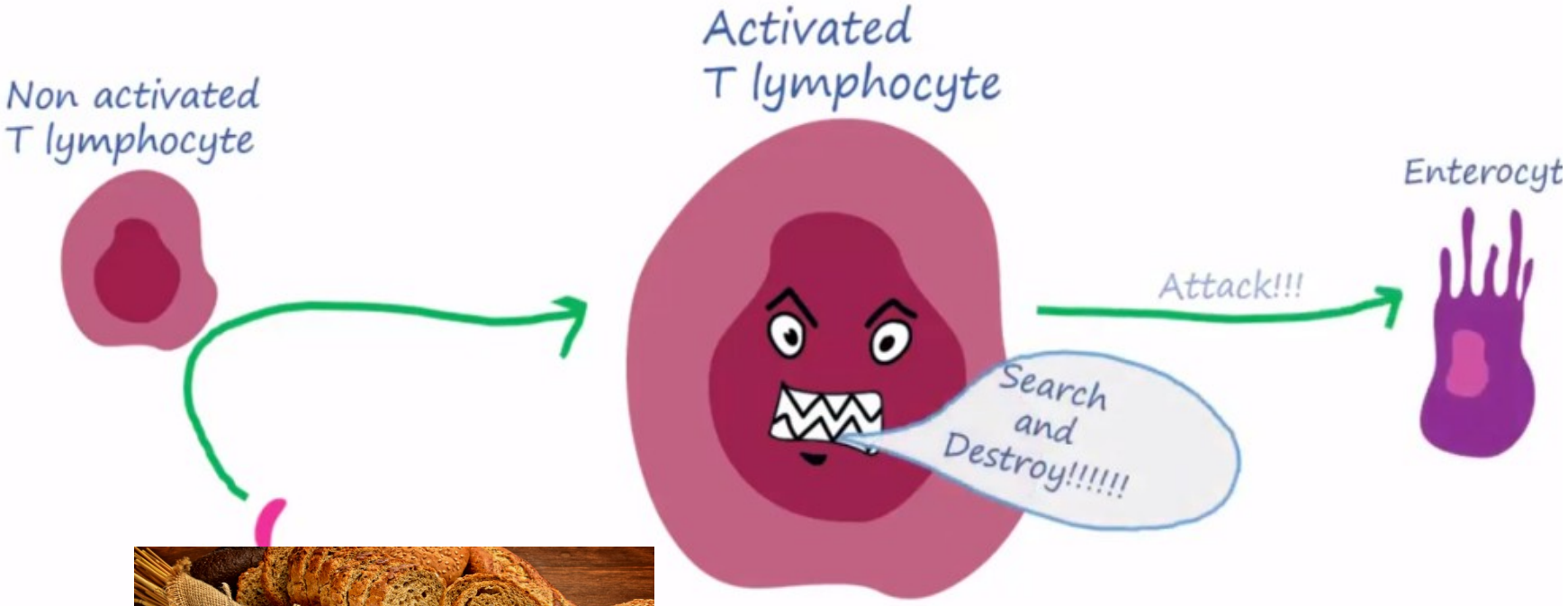
c. Heterotopic tissue : gastric, pancreatic or biliary tissue.

d. Incomplete obliteration of vitello-intestinal duct >Blind-ended pouch lumen communicates with lumen of gut

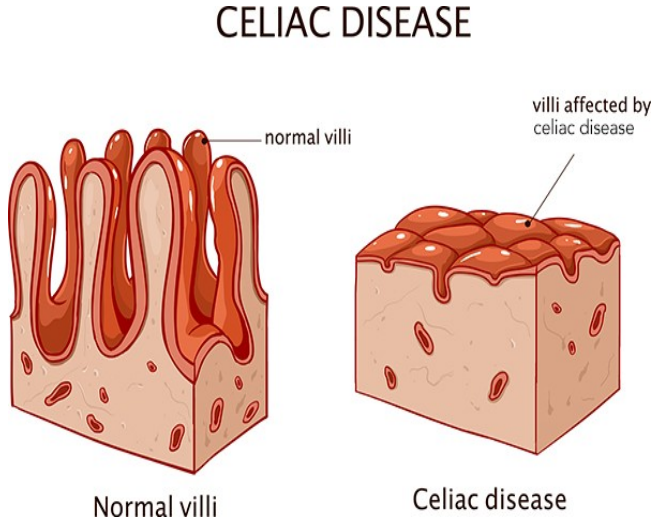
e. Absent ganglion cells in rectal biopsy

Celiac disease = Celiac sprue = gluten sensitive enetropathy

immune-mediated enteropathy due to sensitivity to **gluten** in cereal products -**T cells reaction & antibodies** produced against gluten destroy enterocytes



https://youtu.be/q-lroyk-v3k



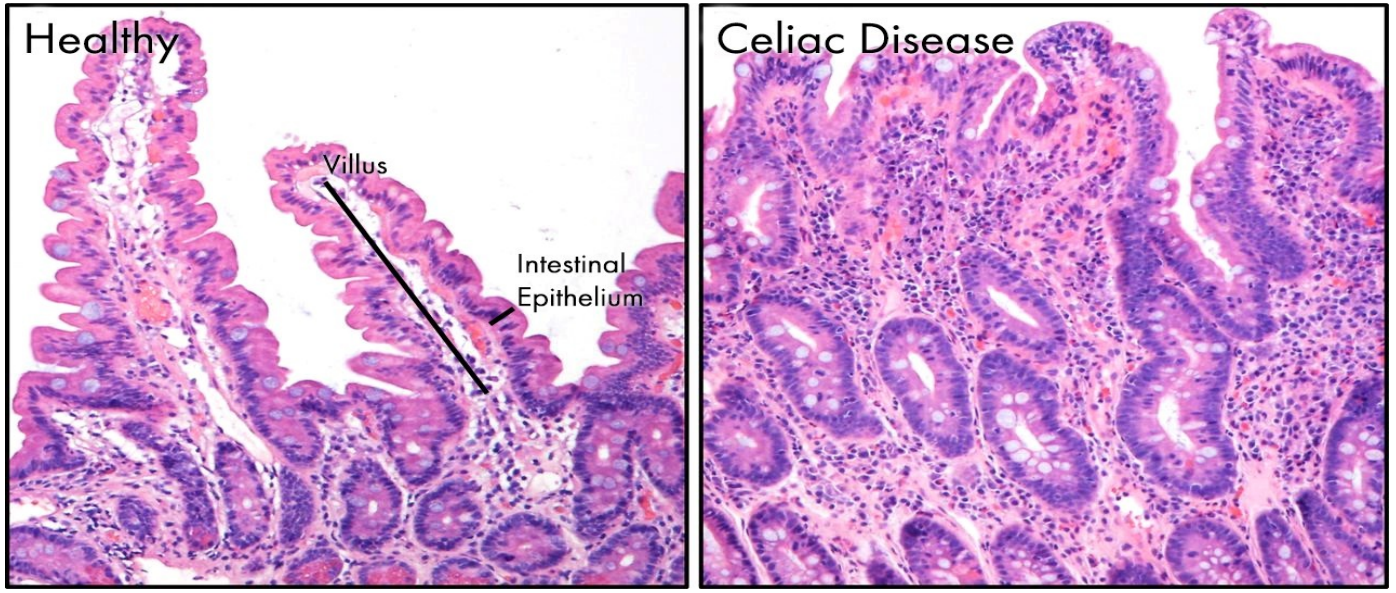
https://www.beyondceliac.org/wp-content/uploads/2019/09/what-is-celiac-disease-villi-gluten-celiac.jpg

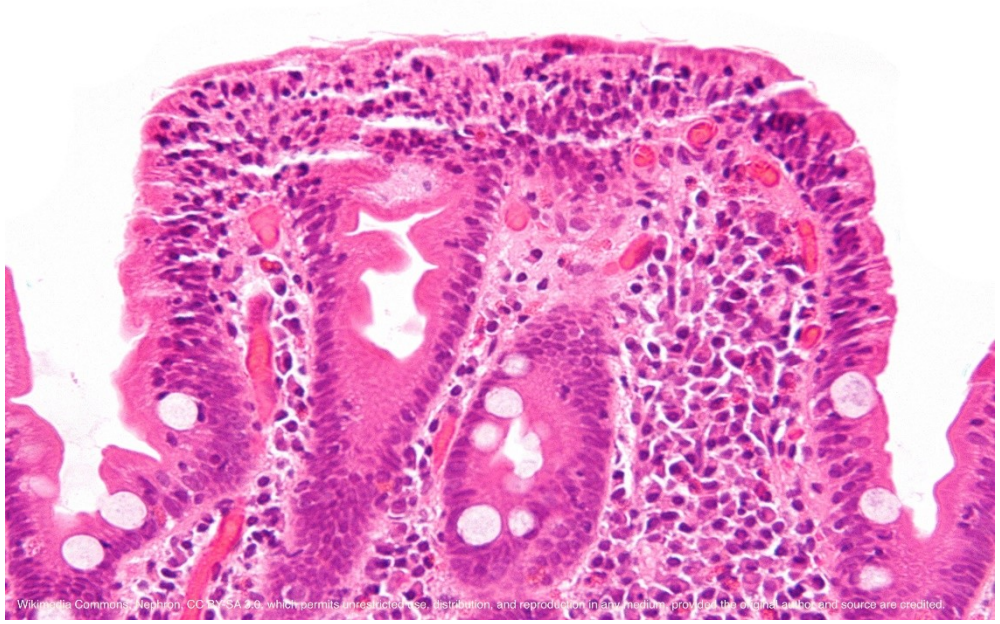
Celiac disease = Celiac sprue = gluten sensitive enetropathy

Describe the microscopic picture of Celiac disease

Mic:

- Intraepithelial lymphocytic infiltrate
- Total Villous atrophy



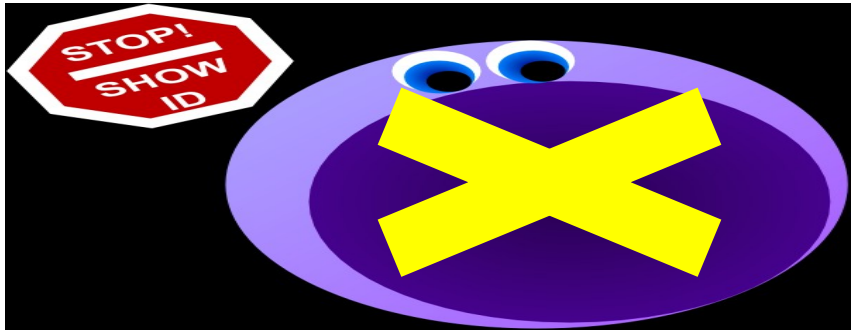


https://www.statpearls.com/ArticleLibrary/viewarticle/19095

Explain the Pathogenesis of Whipple Disease?

Pathogenesis

- **Defective T-lymphocyte** function predispose to
- Infection by **Rod shaped bacilli** (Tropheryma whippelii)



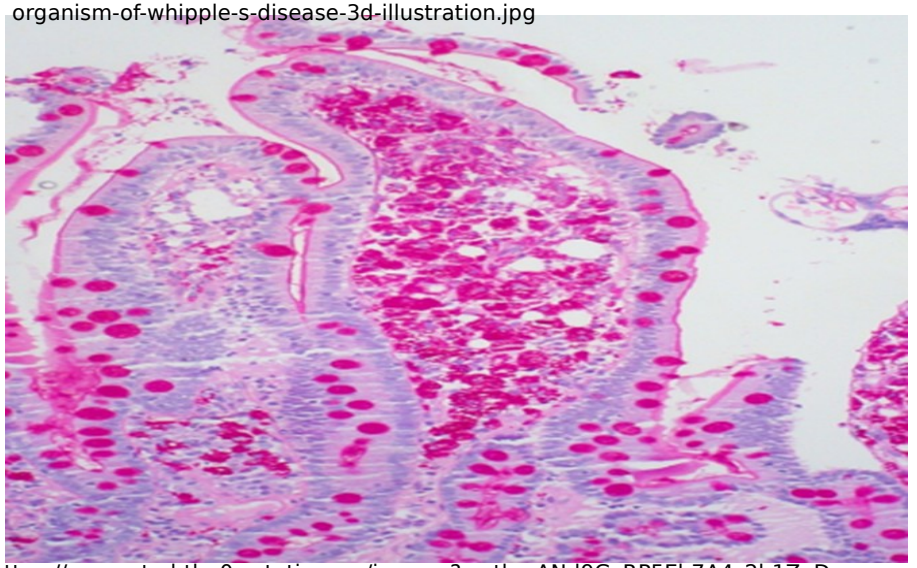
http://www.clker.com/cliparts/M/s/l/W/H/Y/cartoon-t-cell-hi.png

https://previews.123rf.com/images/drmicrobe/drmicrobe1805/drmicrobe180500122/101756141-tropheryma-whipplei-bacteria-the-causative-organism-of-whipple-s-disease-3d-illustration.jpg

Describe the microscopic picture

Mic :

Periodic acid-Schiff (PAS-positive) macrophages in intestinal mucosa



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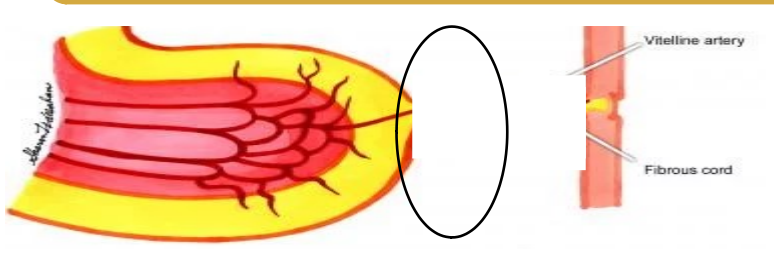
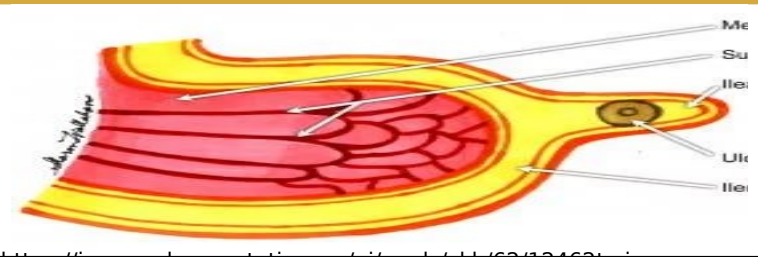
Explain the pathogenesis of Meckel's diverticulum

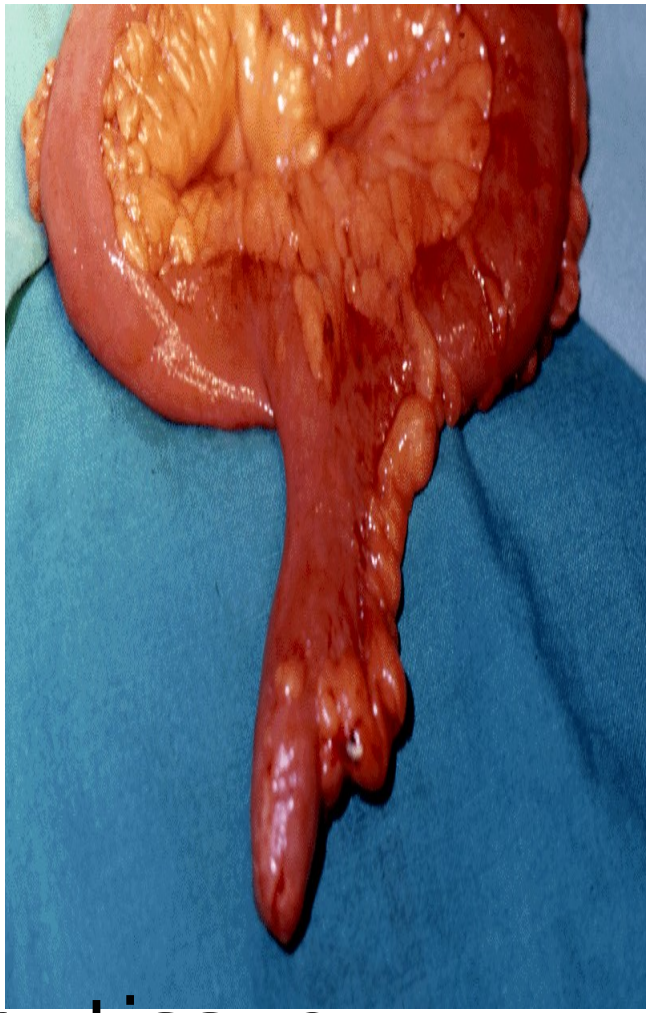




https://img.medscapestatic.com/pi/meds/ckb/62/12462tn.jpg

Due to incomplete obliteration of vitello-intestinal duct

- Blind-ended pouch
- Lumen communicates with lumen of gut



https://i.pinimg.com/originals/02/29/c4/0229c4c6ce89dc80f707aabda5a705aa.jpg

- ~~Occur in ≈ 2% of the population~~
- Present 2 feet (85 cm) away from ileocecal valve
- Approximately 2 inches (5 cm) long

terotopic tissue : gastric, pancreatic or biliary tissue

Explain the pathogenesis of Hirschsprung's Disease (Congenital Megacolon)

- **Pathogenesis:**

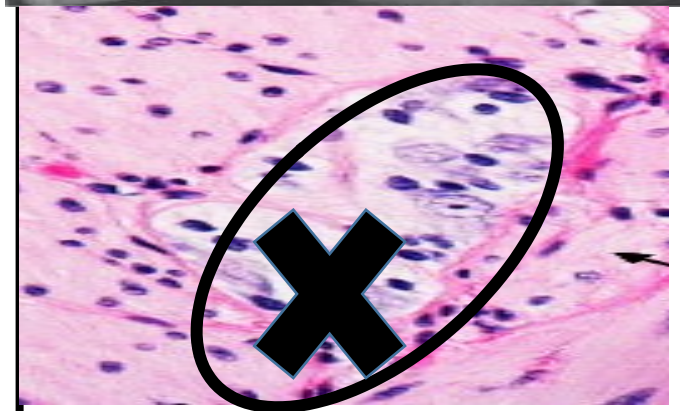
- Arrested migration of neural crest cells into gut (proximal to distal)
- Generates a congenital **aganglionic contracted** distal segment with functional obstruction & proximal dilatation.

C/P:

- **Failure of passage of meconium in neonates Chronic intestinal obstruction>> constant constipation**

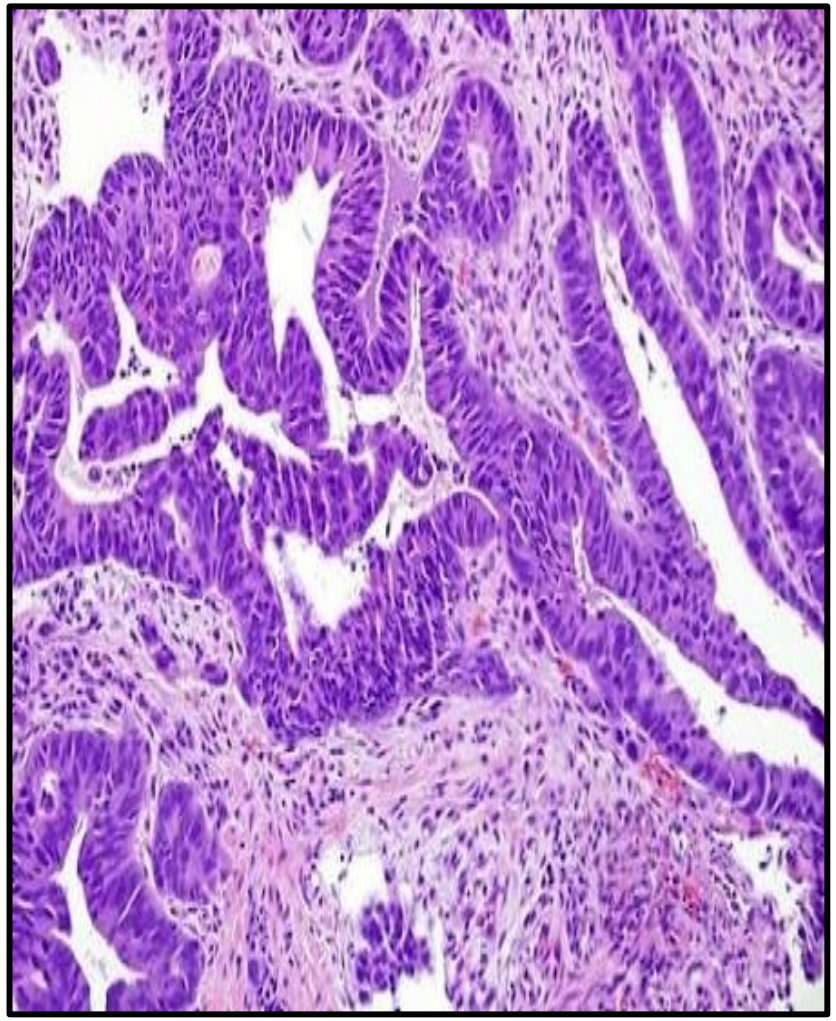
- **Diagnosis** :

Rectal biopsy demonstrates **absence** of ganglion cells



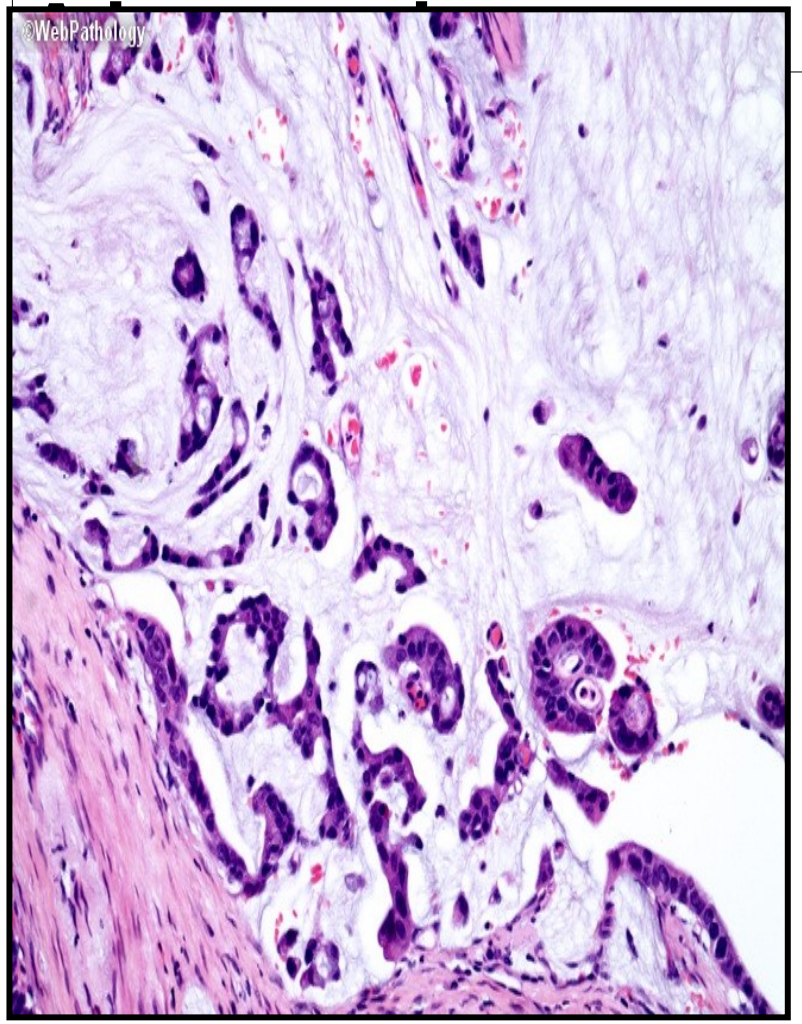
Name the microscopic Types of these Gastric Carcinomas

1-Adenocarcinoma



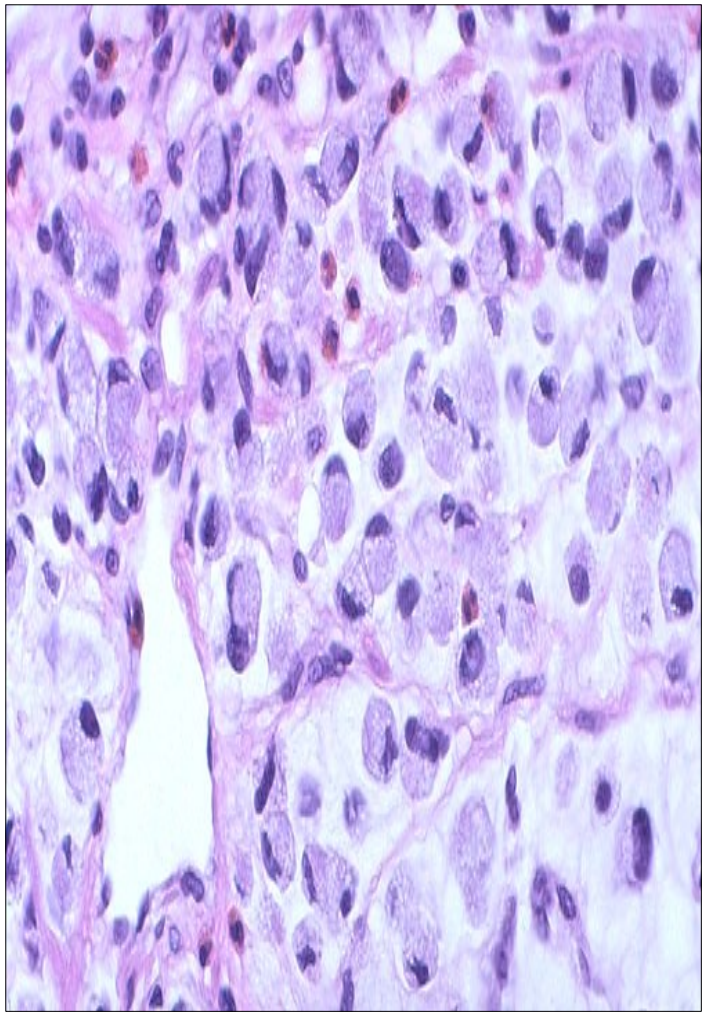
https://player.slideplayer.com/29/9435467/data/images/img4.jpg

2-Mucinous



https://www.webpathology.com/image.asp?case=198&n=25

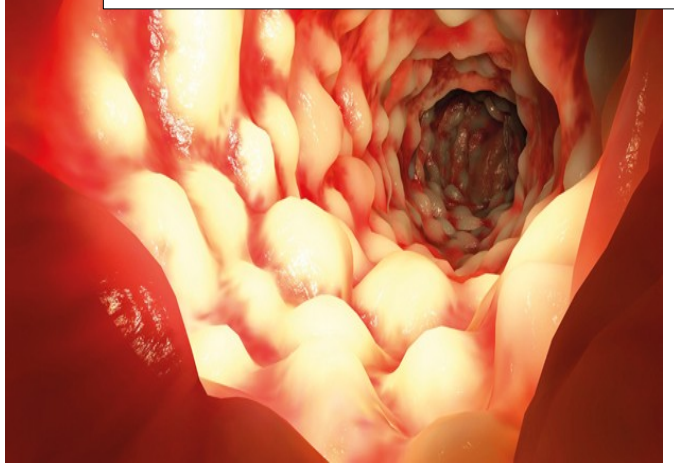
3-Signet ring carcinoma



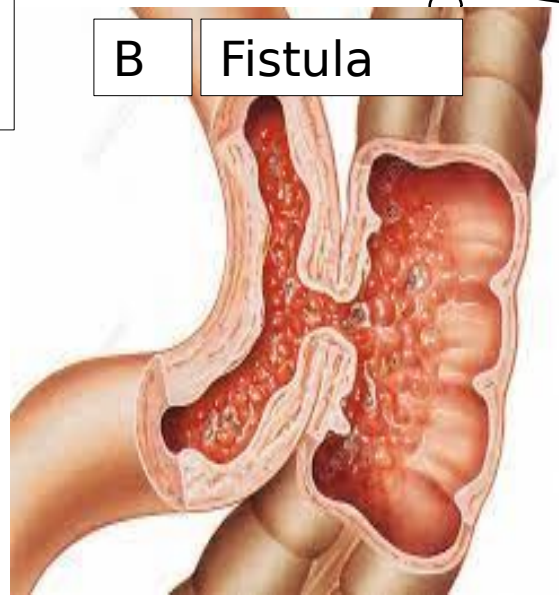
http://jgo.amegroups.com/article/viewFile/410/html/2687

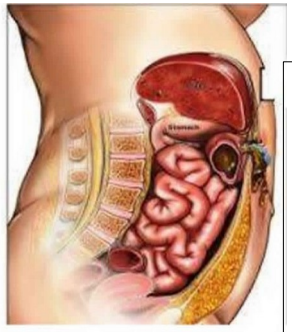
Crohn’s Disease

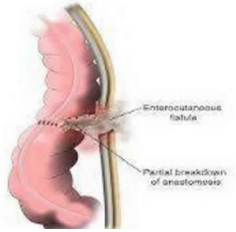
A Cobblestone appearance



B Fistula



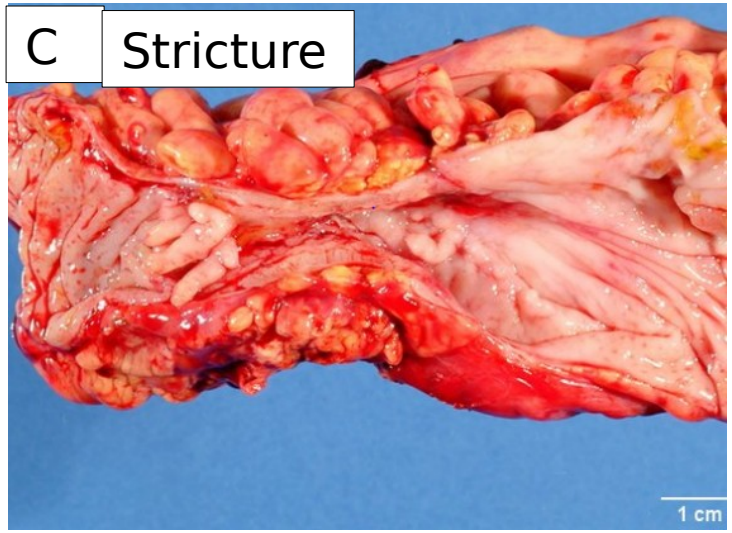




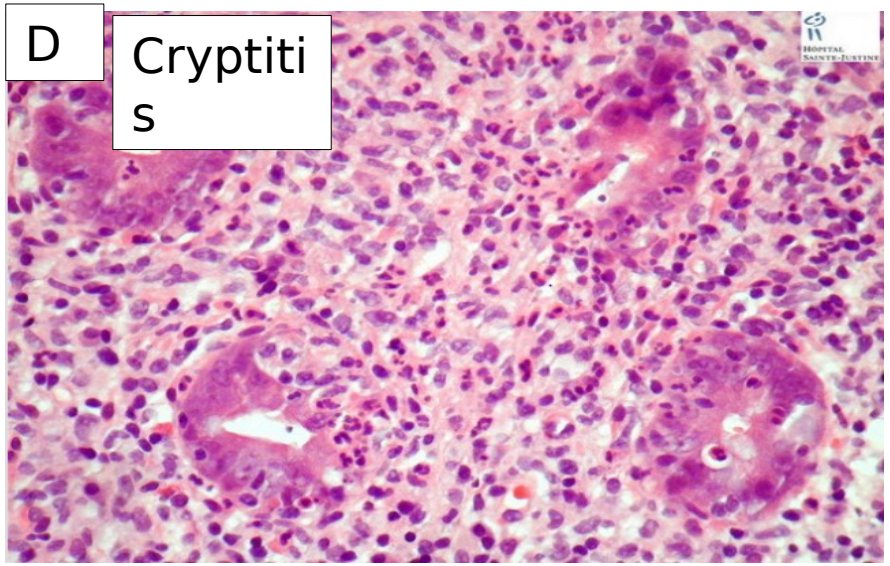
What else??

Skip lesion
Fissure ulcer
Transmural inflammation
Crypt abscess
+/-Extraintestinal manifestation

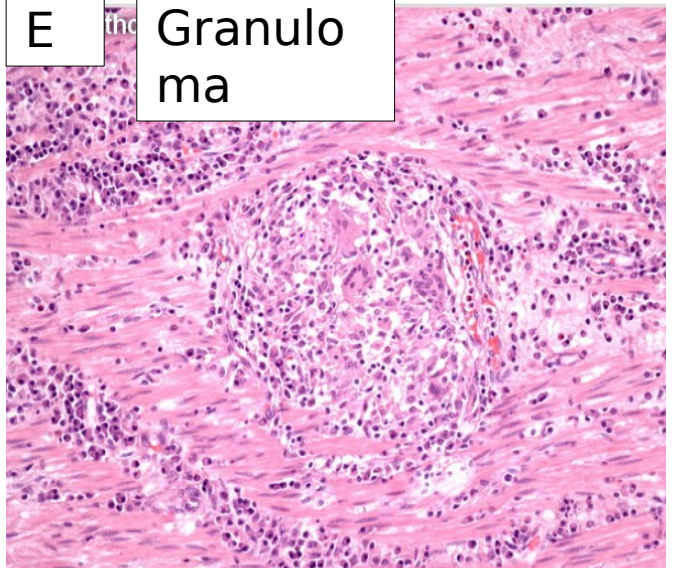
C Stricture



D Cryptitis

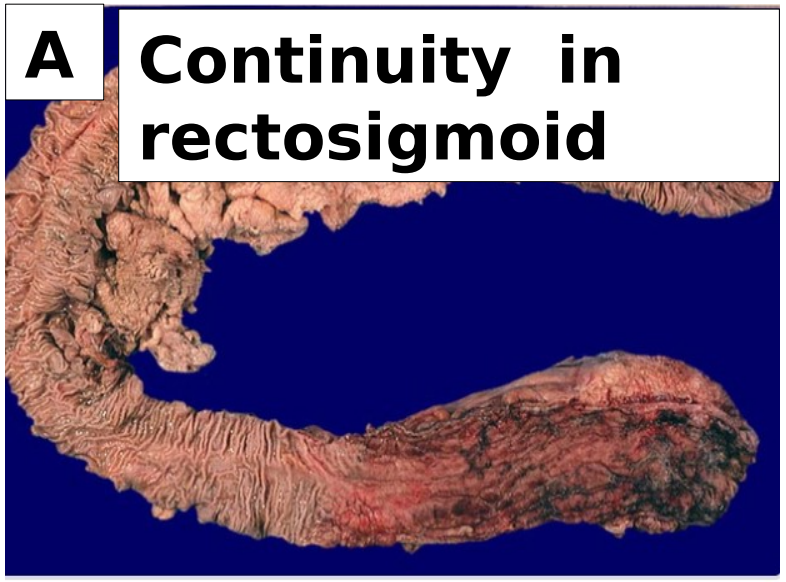


E Granuloma

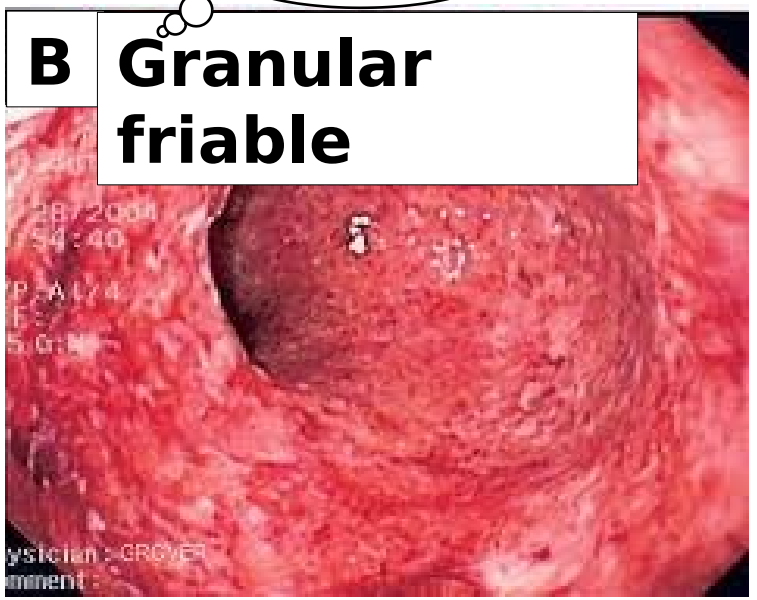


Ulcerative colitis

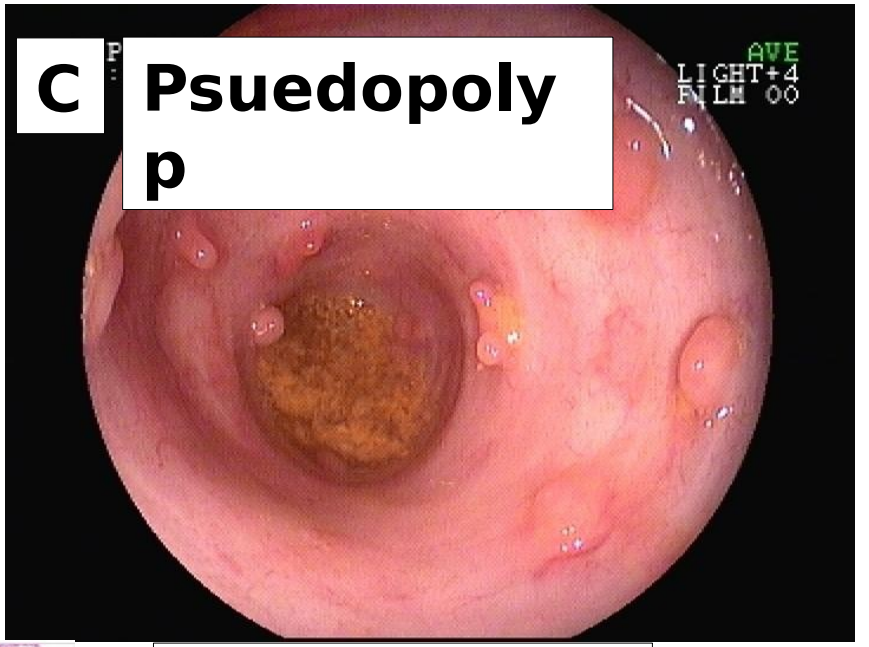
A Continuity in rectosigmoid



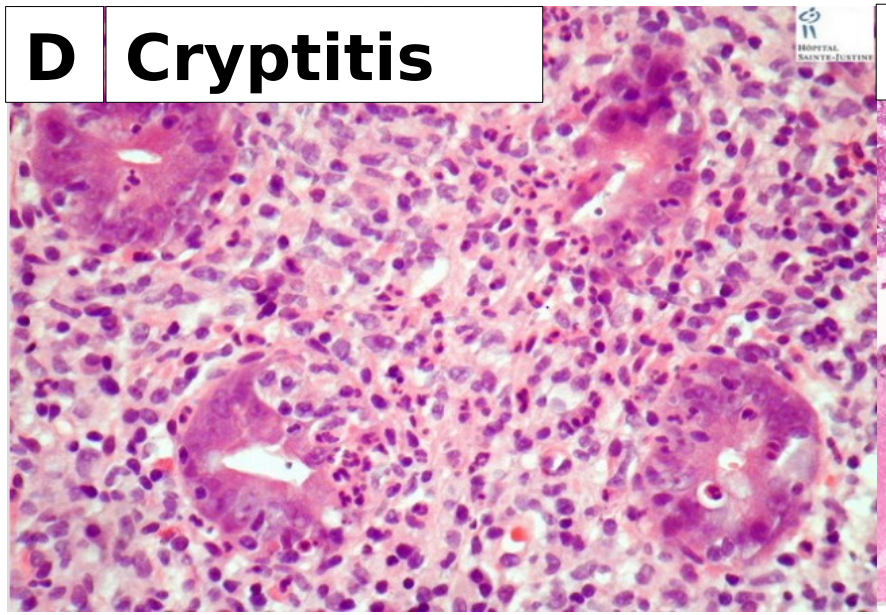
B Granular friable



C Psuedopoly p



D Cryptitis



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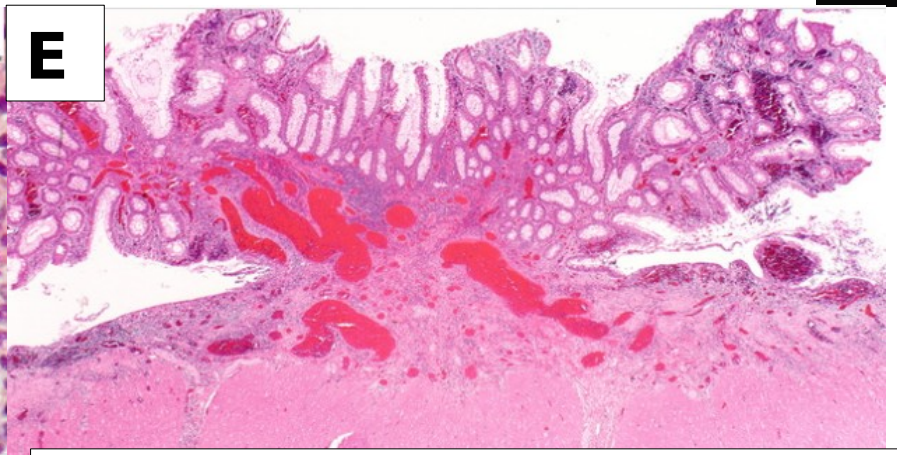


What else??

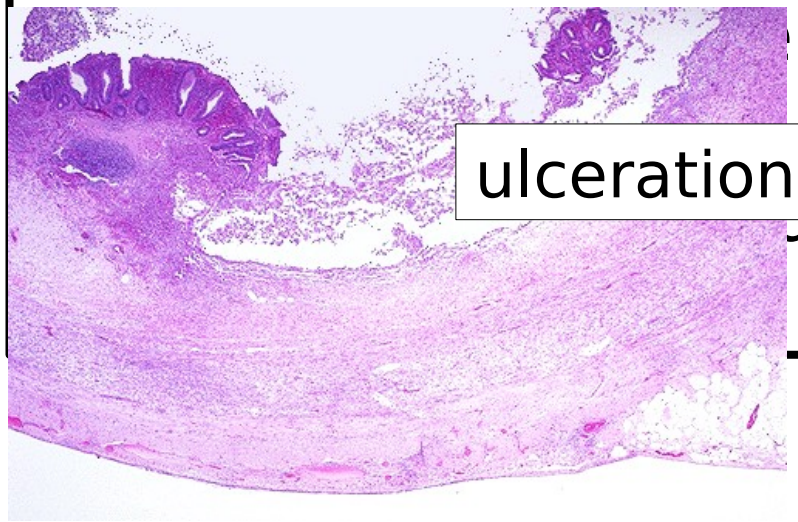
Crypt abscess
+/-
Extraintestinal manifestation

Psuedopolyp & inflammation limited to

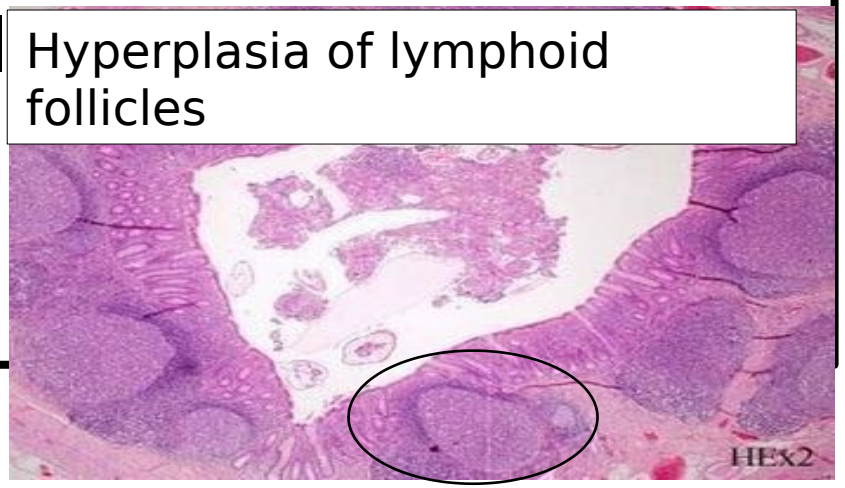
Describe the microscopic features of Acute Appendicitis

Mic :

- Lumen : Filled with necrotic material
- Mucosa : Ulcerations
  Hyperplasia of lymphoid tissue
- Wall : Transmural Infiltration by neutrophils &

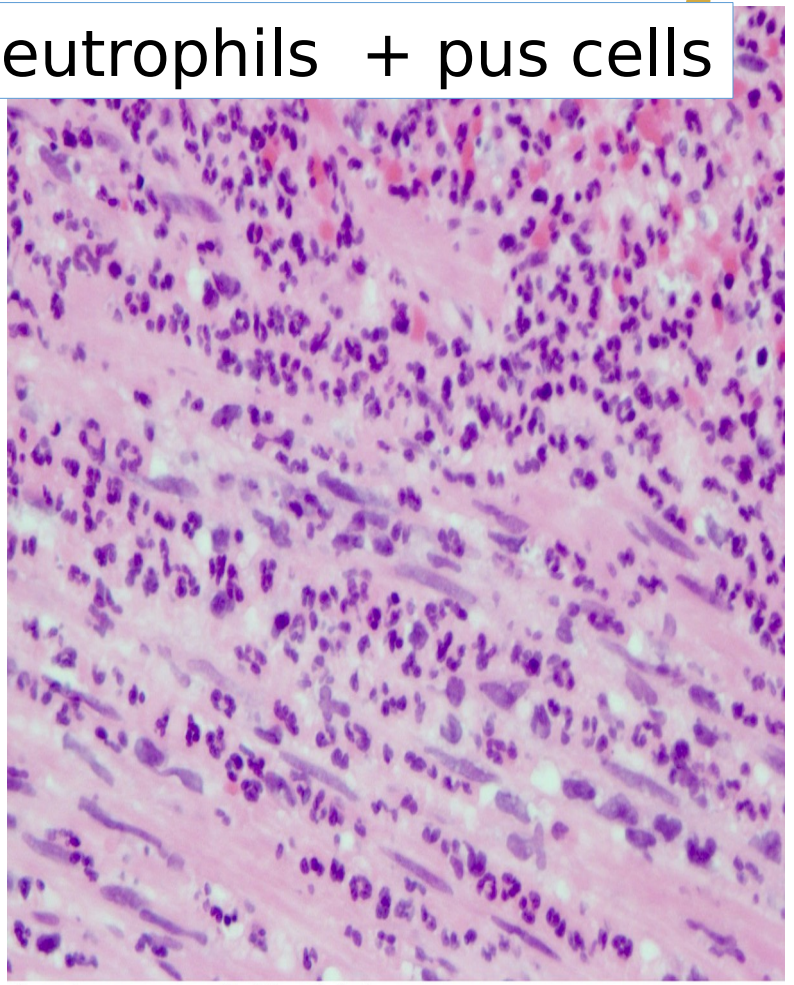


https://www.tau.ac.il/medicine/tau-only/webpath/jpeg4/gi056.jpg



https://cdn.goconqr.com/uploads/flash_card/image_question/4909347/desktop_7bf3883a-22dd-45de-bccc-b28ba8b746e0.jpg

Neutrophils + pus cells

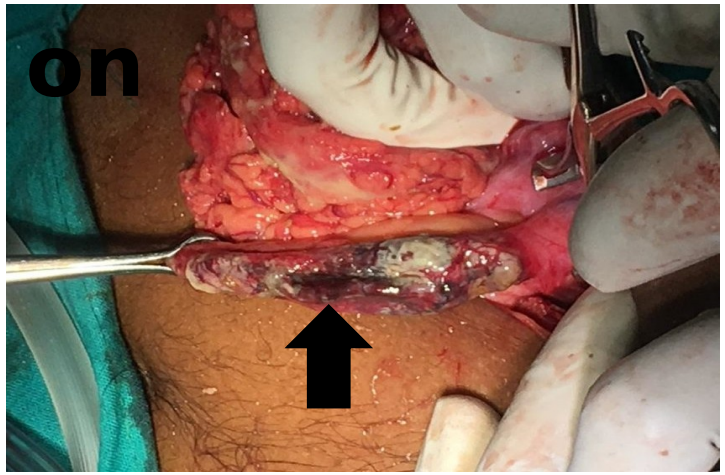


Acute appendicitis, high power

http://www.pathologyoutlines.com/imgau/appendixacuteappendicitisWeisenberg06.jpg

Explain the complicatopns of Acute Appendicitis

1.Perforation



https://www.researchgate.net/profile/Shouptik_Basu/publication/327532709/figure/fig1/AS:668563484442636@1536409364330/Appendicular-Perforation.jpg

2.Appendicular Mass

https://www.researchgate.net/publication/51080030/figure/fig3/AS:202690819825674@1425336665835/Appendicular-mass-and-gangrenous-appendix_Q320.jpg

3.Appendicular abscess

https://i.ytimg.com/vi/SRMOktFZim0/maxresdefault.jpg

4.Portal Pyemia

http://www.fao.org/3/t0756e/T0756E32.jpg

5.Appendicular fistula

https://www.researchgate.net/profile/Sarath_Sistla/publication/277964738/figure/download/fig2/AS:669467273093143@1536624844937/Appendix-adhered-to-

6.Mucocele

https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQqckLR4KjKMvTLvD8lAYPwvn9lL4USc1FID56Z5Ssh2qBka9qNrQ

Surgical Metabolism module

Acute Appendicitis

Effects & Complications:

1. Perforation: with generalized suppurative peritonitis.

2. Chronic appendicitis

2. Appendicular mass:

Mass of inflamed tissue surrounding inflamed and/or ruptured appendix.

3. Appendicular abscess:

rupture of an appendix >> localized abscess in right iliac fossa.

4. Portal pyemia : due to Septic thrombophlebitis leading to septic emboli

5. Fistulous formation: rare, appendicular mass or abscess

Stay Strong
Thank You